UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,870	01/12/2001	Stanley Kin-Sui Cheng	LWC-174	2420

26875 7590 06/10/2003

WOOD, HERRON & EVANS, LLP
2700 CAREW TOWER
441 VINE STREET
CINCINNATI, OH 45202

EXAMINER	
WONG, EDNA	
ART UNIT	PAPER NUMBER
1753	12

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A 312

Office Action Summary	Applicati n No.	Applicant(s)	
	09/759,870	CHENG, STANLEY KIN-SUI	
	Examiner	Art Unit	
	Edna Wong	1753	

-- Th MAILING DATE of this communication appears on the cov r sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,16 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 30, 2003 has been entered.

Claim Objections

Claim **7** is objected to because of the following informalities:

Claim 7

line 1, it is suggested that the word -- coating -- be inserted after the word "enamel".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims **11, 13 and 17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11

line 4, it appears that the blank of flat metal is stamped. However, it is unclear if it is.

line 5, it appears that "the article" is the same as the article stamped into the desired shape. However, it is unclear if it is.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Product

I. Claims **12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dorfschmidt** (US Patent No. 5,989,631) in combination with **Paul** (US Patent No. 5,411,014).

Dorfschmidt teaches an article of cookware comprising:

(a) a coating of enamel (= enameling) on the exterior of a cookware article formed of aluminum or aluminum alloy (col. 2, lines 37-48); and

(b) a coating of an anodization layer on the interior of the article (col. 1, lines 5-22).

Dorfschmidt does not teach wherein the enamel is a porcelain enamel.

However, Paul teaches that it is conventional to coat the exterior of a cookware article formed of aluminum or aluminum alloy with a porcelain enamel because said coating has the ability to absorb heat quickly; that is, to transmit heat from a heat source to the cooking surface (col. 3, line 61 to col. 4, line 3).

Thus, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one skilled in the art would have been motivated to have modified the article of cookware of Dorfschmidt with wherein the enamel is a porcelain enamel because Dorfschmidt teaches enameling broadly (col. 2, lines 37-48) and coating the exterior of the cookware article with a porcelain enamel would have provided a cooking surface that would have absorb heat quickly as taught by Paul (col. 3, line 61 to col. 4, line 3).

As to the limitation of when formed according to the method of claim 1 or claim 11, the subject matter would have been obvious to the skilled artisan because the patentability of a product by process claim does not depend on its method of production and where the examiner has found a similar product, the burden rests with the applicant to prove that that product is patentably distinct. See *In re Thorpe*, 227 USPQ 964 (CAFC 1985); *In re Marosi et al.*, 218 USPQ 289; *In re Pilkington*, 162 USPQ 145.

"The lack of physical description in a product-by-process claim makes the determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not the process that must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 173 USPQ 685,688 (CCPA 1972).

Method

II. Claims **1-10 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dorfschmidt** (US Patent No. 5,989,631) in combination with **Paul** (US Patent No. 5,411,014) and **Meyer Aluminum Limited** (© 2000) [pages 1 and 2].

Dorfschmidt teaches a method of surface treating a cookware article formed of aluminum or aluminum alloy, comprising the steps of:

(a) applying a first coating of enamel (= enameling) to the exterior of the article (col. 2, lines 37-48);

(b) exposing the interior and exterior of the article to an anodizing acid solution to subject the interior of the article to anodizing after the first coating is applied; and

(c) applying a non-stick coating to the anodized interior of the article (col. 1, lines 5-22).

Dorfschmidt does not teach wherein the enamel is a porcelain enamel.

However, Paul teaches that it is conventional to coat the exterior of a cookware article formed of aluminum or aluminum alloy with a porcelain enamel because said coating has the ability to absorb heat quickly; that is, to transmit heat from a heat source to the cooking surface (col. 3, line 61 to col. 4, line 3).

The porcelain enamel coating is applied by a spraying operation. The coating is subjected to an infrared curing process to achieve partial hardening of the porcelain and complete hardening is achieved by a forced air cooling process. Friction materials are applied via a silk screening process. If a decorative finished is desired, additional decorative material may be silk screened onto the sidewall (col. 5, line 62 to col. 6, line 6; and Fig. 4).

Thus, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one skilled in the art would have been motivated to have modified the method of Dorfschmidt with wherein the enamel is a porcelain enamel because Dorfschmidt teaches enameling broadly (col. 2, lines 37-48) and coating the exterior of the cookware article with a porcelain enamel

would have provided a cooking surface that would have absorb heat quickly as taught by Paul (col. 3, line 61 to col. 4, line 3).

As to wherein the anodizing is hard anodizing, hard anodizing aluminum is conventional in the art. Meyer Aluminum Limited teaches that The Meyer Corporation was one of the pioneers in applying the hard anodize technology to cookware (page 2). Thus, it is well within the skill of the artisan to have hard anodized the cookware article dependent upon the intended use of the article, particularly to the environment to which the article will encounter, which would be most suited for the application of the article, absent evidence to the contrary.

As to applying a second coating of porcelain enamel over the first coating after the interior of the article is hard-anodized, this is well within the skill of the artisan because the repetition of the applying step to provide the same results is within the skill of one having ordinary skill in the art. The concept of duplication is not patentable. *St. Regis Paper Co. v. Bemis Co. Inc.*, 193 USPQ 8, 11 (7th Cir. 1977). While this decision relates to the duplication of parts, there is no reason why such duplication cannot be extended to a process step.

Furthermore, it is well within the skill of the art to apply a second coating for the purpose of improving wear resistance, scratch resistance, corrosion protection or thermal conductivity.

As to wherein the porcelain enamel is applied as a porcelain slip which is cured at an elevated temperature, Paul teaches that the porcelain enamel coating is subjected to an infrared curing process to achieve partial hardening of the porcelain and complete hardening is achieved by a forced air cooling process (col. 5, lines 62-66).

Paul appears to disclose a porcelain enamel coating at least in a similar manner as instantly claimed. Therefore, it would have been within the skill of the art to expect that the porcelain enamel coating disclosed by Paul is a porcelain slip, unless proven otherwise.

It appears that the infrared curing process and/or the forced air cooling process is curing at an elevated temperature, unless proven otherwise.

As to wherein the second porcelain enamel coating is subjected to curing at a temperature which is sufficient to at least partially remelt the surface of the first porcelain enamel coating, (the repetition of steps) to apply a second porcelain enamel coating by subjecting the article to a second infrared curing process to achieve partial hardening of the porcelain and complete hardening is achieved by a second forced air cooling process, it appears that the infrared curing process and/or the forced air cooling process is curing at a temperature which is sufficient to at least partially remelt the surface of the first porcelain enamel coating, unless proven otherwise.

As to wherein the first porcelain enamel coating is applied as a layer of thickness

in the range of 25 to 35 microns, the thickness of the first porcelain enamel coating is a result-effective variable and one skilled in the art has the skill to calculate the thickness that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

As to wherein the second porcelain enamel coating is applied as a layer of thickness in the range of 30 to 35 microns, the thickness of the second porcelain enamel coating is a result-effective variable and one skilled in the art has the skill to calculate the thickness that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

As to wherein the second porcelain coating is subjected to rapid drying using infrared heating means to dry the enamel surface, followed by silkscreen printing of a pattern onto the dried surface, this is well within the skill of the artisan as taught by Paul for providing resistance to sliding and/or for a decorative finish (col. 5, line 62 to col. 6, line 6).

As to wherein the first porcelain is heated to curing at a temperature in the region of 540 to 555°C, the curing temperature is a result-effective variable and one skilled in the art has the skill to calculate the temperature that would determine the success of the desired reaction to occur, i.e., curing the coating, absent evidence to the contrary.

MPEP § 2141.03 and § 2144.05(b).

Furthermore, it appears that the curing temperature would have depended upon the composition of the porcelain enamel coating. It appears that different porcelain enamel coating compositions would have cured at different temperatures.

As to wherein said curing is carried out for 1 to 1.5 minutes, the curing time is a result-effective variable and one skilled in the art has the skill to calculate the curing time that would determine the success of the desired reaction to occur, i.e., curing the coating, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

Furthermore, it appears that the curing time would have depended upon the composition of the porcelain enamel coating and the conditions of the process. It appears that different porcelain enamel coating compositions would have cured at different times and process conditions.

As to wherein at step (b) the interior of the article is subjected to anodizing for less than 20 minutes, the anodizing time is a result-effective variable and one skilled in the art has the skill to calculate the anodizing time that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

Furthermore, it appears that the anodizing time would have depended upon the conditions of the anodizing process, the composition of the alloy material and the

desired thickness of the anodic oxide coating. It appears that different process conditions, type of alloy material and the desired thickness would have contributed to different anodizing times.

As to wherein exposing the interior and exterior of the article to the anodizing acid solution further comprises partially removing the first coating from the exterior, Dorfschmidt appears to disclose a method at least in a similar manner as instantly claimed. There does not appear to be any method limitations set forth in the instant claims to distinguish the instant claims from the prior art. Therefore, it would have been within the skill of the artisan to expect that the anodizing disclosed by Dorfschmidt would have, inherently, partially removed the first coating from the exterior of the article, unless proven otherwise.

III. Claims **11 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dorfschmidt** (US Patent No. 5,989,631) in combination with **Paul** (US Patent No. 5,411,014), **Meyer Aluminum Limited** (© 2000) [pages 1 and 2] and **Doyle et al.** (US Patent No. 5,628,426).

Dorfschmidt, Paul and Meyer Aluminum Limited are as applied for the reasons above and incorporated herein.

Dorfschmidt does not further teach the steps of:

(i) providing a blank of flat metal; and

(ii) forming the article by stamping into the desired shape.

However, Doyle teaches a method of forming an article of cookware of aluminum, comprising the steps of:

(a) providing a round disk of flat metal **10**; and

(b) forming the article by stamping into the desired shape (col. 4, line 66 to col. 5, line 43; and Figs. 1-9).

Thus, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one skilled in the art would have been motivated to have modified the method of Dorfschmidt by (i) providing a blank of flat metal; and (ii) forming the article by stamping into the desired shape because these steps are conventional in forming an article of cookware of aluminum as taught by Doyle (col. 4, line 66 to col. 5, line 43; and Figs. 1-9).

Furthermore, Dorfschmidt is silent to making the pots and pans (col. 1, lines 5-22), thus, the pots and pans would have been made by using conventional method steps, unless proven otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (703) 308-

3818. The examiner can normally be reached on Mon-Fri 7:30 am to 5:00 pm, alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 873-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1495.

Edna Wong
Primary Examiner
Art Unit 1753

EW
June 9, 2003